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RUEHBY/AMEMBASSY CANBERRA 1818
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RUEHLO/AMEMBASSY LONDON 2064
RUEHNE/AMEMBASSY NEW DELHI 5292
RUEHUL/AMEMBASSY SEOUL 8892
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RUEHKO/AMEMBASSY TOKYO 6465
RUEHCN/AMCONSUL CHENGDU 1718
RUEHCHI/AMCONSUL CHIANG MAI 2082
RUEHCI/AMCONSUL KOLKATA 0566
RHHMUNA/CDR USPACOM HONOLULU HI
RUEKJCS/JOINT STAFF WASHDC
RUCNDT/USMISSION USUN NEW YORK 2286
RUEHGV/USMISSION GENEVA 4303
RUEATRS/DEPT OF TREASURY WASHDC
RUEKJCS/DIA WASHDC
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C O N F I D E N T I A L SECTION 01 OF 04 RANGOON 000132

SENSITIVE
SIPDIS

STATE FOR EAP/MLS; INR/EAP; OES, EEB
BANGKOK FOR REO - HHOWARD
PACOM FOR FPA;
TREASURY FOR OASIA: SCHUN

E.O. 12958: DECL: 03/03/2019
TAGS: [ECON](#) [ENRG](#) [PGOV](#) [EPET](#) [PINR](#) [BM](#)
SUBJECT: USGS/DOC ASSESS BURMA'S OIL AND GAS RESOURCE AND
INVESTMENT POTENTIAL

REF: A. RANGOON 57
[1](#)B. RANGOON 112

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Classified By: Economic Officer Samantha A. Carl-Yoder for Reasons 1.4
(b and d).

Summary

[1](#)1. (C) During a three-day trip to Burma, United States Geological Survey (USGS) petroleum geologist Craig Wandrey and Department of Commerce (DOC) senior energy analyst Paul Hueper met with international and local oil and gas companies operating in Burma to assess the country's resource potential and future investment needs to exploit those resources commercially. The team concluded that Burma has considerable additional undiscovered oil and gas natural gas potential, but that difficult geology (e.g., over-pressured reservoirs), lack of infrastructure and logistics capability, and the high cost of exploration and production will limit the interest and ability of foreign companies to expand operations. Consequently, the amount of income the GOB is likely to earn from any near-term oil and gas developments and export projects will be lower than previously anticipated. End Summary.

Is There More Gas Offshore?

[1](#)2. (SBU) During a February 4-6 visit to Rangoon, officials

from the USGS and the Department of Commerce met with local representatives from Chinese National Offshore Oil Company (CNOOC), French-owned Total, Chinese National Petroleum Corp. (CNPC), Malaysian-owned Petronas, Korean-owned Daewoo, Swiss company Focus Energy, Burmese-owned Myanmar Petroleum Resources Ltd. (MPRL), and Burmese-owned Silverwave Energy. Officials from Thai-owned PTTEP and Indian-owned Essar declined to meet with the USGS team.

13. (C) Burma is a resource-rich country, and natural gas provides the regime with a substantial percentage of its income. In 2008 the sale of natural gas, valued at more than USD 2.5 billion, accounted for approximately half of Burma's exports (Ref A). Currently, only two offshore fields - Yadana, operated by Total (with Chevron as one of several partners), and Yetagun, operated by Petronas - produce gas, with about 85 percent exported to Thailand. Despite publicized start-up dates early next decade, significant delays may be incurred at the country's two proposed new gas export projects - the Shwe fields, operated by Daewoo, and three small fields in the M9 block, operated by PTTEP. The Shwe fields are located off the coast of Rakhine State in the Bay of Bengal (Blocks A1 and A3), while the M9 block is located in the Gulf of Martaban, directly south of the Yetagun Gas fields. According to company press statements, pending new pipeline construction Daewoo will sell Shwe gas to China and PTTEP will sell its gas to Thailand. The USGS/DOC team believes the Shwe field development will be delayed by challenging field development and economics associated in part with selling gas into southern China, including the cost and time to build a more than 900 mile pipeline through treacherous terrain. At M9, it remains

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unclear if PTTEP has found gas accumulations of sufficient size to justify an export project. While both PTTEP and Daewoo claim they will begin producing and exporting natural gas by 2012, this date will likely slip to 2013 or even later, the team concluded.

14. (C) A major gas discovery by Daewoo in offshore Western Burma several years ago has prompted a race by foreign companies to secure exploration contracts for remaining on- and off-shore exploration blocks. Currently, 16 companies (mostly Asian) have secured rights to 27 Burmese offshore blocks, either for exploration or drilling. The USGS/DOC experts learned that less than one-third of the companies are actually active in these blocks, either because they lack the funds to do so or the capacity to overcome the technical challenges associated with water depths and over-pressured reservoirs.

15. (C) Officials from CNPC and CNOOC, which hold the blocks along the same geological trend as Daewoo's acreage in the Andaman Sea, reported their plans to develop the blocks are on hold due to the world financial crisis and the decreasing price of natural gas. Petronas representatives also noted that several companies, such as Daewoo and PTTEP, recently drilled exploratory wells in both the Andaman Sea and the Gulf of Martaban at a substantial cost (USD 25 million for a well in PTTEP's shallow water block M9) but did not find gas reserves. Exploratory drilling in deeper waters could cost up to USD 300 million per well. Current investors lack the resources, technology, and expertise to explore deep water blocks, and will likely pay a small fine (up to several million dollars) to relinquish them rather than spend hundreds of millions to explore them, the USGS/DOC team asserted.

16. (C) While petroleum geologists believe there are large natural gas reserves off of Burma's coast, companies have little seismic and subsurface data with which to verify those assertions. Total drilled six dry or sub-commercial wells in the 1970s in shallow waters off the coast, but targeted anticline structures are unlikely to be prospective. Of the 16 companies working offshore, only three - MPRL, Daewoo, and

PTTEP - have conducted 2D and 3D seismic studies in their respective blocks. Petroleum system analysis and limited source rock samples from the onshore portion of the Rakhine Basin in the Andaman Sea indicate potential resources exist along Burma's coast, but it is uncertain how large these may be. It also is not clear whether the remaining gas reserves will be commercially feasible to develop given technical challenges and financial limitations.

Oil Potential?

17. (C) Burma's onshore oil production is limited; the 18 operational oil fields produce roughly 10,000 barrels a day, all consumed locally (Ref B). In addition, Petronas produces roughly 12,000 barrels a day of natural gas liquids, which also is used to satisfy domestic demand. Small independent companies - MPRL and Focus Energy - additionally produce more than 4,500 barrels a day combined. Terry Howe, MPRL Country Director, told the USGS/DOC visitors that while the GOB

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encourages foreign investment in onshore oil blocks, companies are only allowed to invest in blocks located in remote areas. According to Howe, developing these blocks is costly; MOGE relies on foreign investment because it lacks the resources to explore in remote areas.

18. (C) Myanmar Oil and Gas Enterprise (MOGE), the state-owned enterprise responsible for oil and gas development, claims that there are 3.2 billion barrels of oil reserves onshore. This compares with an earlier USGS mean assessment that the country's central onshore basin contains about 725 million barrels of undiscovered resources, with existing reserves being much smaller. Based in part on discussions held with foreign companies during the trip, the USGS/DOC team believes that considerable onshore oil resource and development potential may exist, particularly in reservoirs deeper than have been exploited at existing fields. However, these resources are unlikely to be explored or developed soon, as existing seismic and subsurface data is too limited.

19. (C) As detailed in Ref B, Burma's onshore oil production is well below expected resource availability. Offshore production of oil is limited to approximately 10,000 barrels of condensate produced daily by the Yegatun natural gas fields. (Note: Burma's offshore production is focused more on natural gas than oil.) The three onshore companies currently producing oil - MPRL, Gold Petrol, and Focus Energy - have no plans to increase investment in Burma, given the current world price of oil.

110. (C) Additionally, most of Burma's untapped oil resources are likely located in the Chindwin area in northern Burma, perhaps the most remote location in the country. The Chindwin anticline is the world's second largest and is only surpassed by Saudi Arabia's Ghawar oil field. According to USGS's Wandrey, Burma's Chindwin anticline, while capable of generating oil, is "leaky," meaning that trapped oil volumes will be substantially smaller than the anticline's size would suggest. Minn Minn Oung of Silverwave Energy, which has the rights to the B-2 block in the Chindwin area, estimated that to drill a single exploratory well in the anticline would cost USD 60 million, mainly because of difficult logistics. Amoco spent \$100 million exploring this area in the 1980s but never found enough reserves to make production commercially viable.

USGS Conclusions

111. (C) Data on Burma's oil and gas reserves and resource potential is difficult to obtain. USGS/DOC intend to complete a resource and economic assessment, which will provide a good indication of the extent of Burma's resource

base and likely investment costs required to develop and export these resources. USGS/DOC's initial view is that while significant oil and gas reserves exist, it will be difficult and expensive for companies to access them, limiting the commercial prospects of both oil and gas production. The primary impediments to resource recovery include limited subsurface data, high operational costs, lack of infrastructure, and MOGE mismanagement of reservoirs at

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existing fields. The USGS/DOC team came to a tentative conclusion that the profits the GOB will earn from future oil and gas production is likely to be less than expected, although gas export revenues will continue to account for 50 percent of overall exports. Current GOB income from the sale of natural gas to Thailand is approximately USD 2.5 billion annually. This figure will increase when both Daewoo and PTTEP begin selling gas from their respective blocks in 2013, although it is unclear by how much.

112. (U) The USGS/DOC team cleared this cable.

VAJDA